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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/379,945	08/24/1999	JEFFREY S. ANDERSON	09623A-071500US	1979

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EXAMINER

MEI, XU

ART UNIT	PAPER NUMBER
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2615

MAIL DATE	DELIVERY MODE
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03/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/379,945

Applicant(s)

ANDERSON, JEFFREY S.

Examiner

Xu Mei

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-11,14-19 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-11,14-19 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This communication is responsive to the applicant's amendment dated 12/05/2007.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 31 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konno (US-5,305,388) in view of Brokaw (US-3,564,445).

Regarding Claim 1, Konno discloses a dynamic bass equalization circuit with a second or higher order active filter having a dynamically adjusted gain and frequency response that vary with the amplitude of the audio electrical signal (Col. 2, lines 1-42). Konno does not disclose an amplifier with a negative feedback path which reduces a gain of the amplifier as the amplitude of the audio electrical signal increase. Brokaw discloses an amplifier that having a negative feedback path (as shown in Figs. 2 and 4) in order to perform proper signal biasing and reduces a gain of the amplifier as the amplitude of the audio electrical signal increase (limiting output of the feedback amplifier when a predetermined amplification, i.e., input electrical signal, is reached, col. 3, lines 42-52) for the entire operating range of the driver-amplifier combination thus prevent

distortion of the original signal (see col. 2, lines 11-41, for example). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the circuit of Konno by including a negative feedback path amplifier for reducing a gain of the amplifier as the amplitude of the audio electrical signal increases in order to perform proper signal biasing and prevent signal distortion of the signal to improve accuracy.

Regarding Claim 2, Konno discloses a Sallen-Key high pass filter (Fig. 1).

Regarding claim 31, Brokaw discloses the feedback path amplifier including a parallel pair of opposed diodes (D1 and D2 of Figs. 2 and 4).

Regarding Claim 8, Konno further discloses a positive feedback path having a voltage divider that voltage divides a feedback voltage (Fig. 1).

Regarding Claims 9-10, Konno further discloses a bass equalized audio signal that is delivered to a sub-woofer driver or full-range speaker driver at output 12 (It is inherent that the audio signal will be delivered to a sub-woofer driver, i.e., for low frequency audio output; or a full-range speaker driver in order to drive a speaker for generating an audible output).

Regarding Claim 5, Brokaw further discloses resistor 22 in series with the parallel pair of opposed diodes.

Regarding Claim 6, Konno further discloses a positive feedback path having a voltage divider that voltage divides a feedback voltage (Fig. 1).

Regarding Claim 7, Brokaw further discloses resistor 22 in series with the parallel pair of opposed diodes.

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4. Claims 11 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konno in view of Brokaw as applied to claim 1 above, and further in view of Serikawa et al (US-4,751,739, Serikawa).

Regarding Claim 11, the combinations of Konno and Brokaw disclosed an improved amplifier system for processing audio signals as discussed in claim 1 above. Konno further discloses a dynamic bass equalization circuit with a second or higher order Sallen-Key filter having a dynamically adjusted gain and frequency response that vary with the amplitude of the audio electrical signal (Fig. 1, Col. 2, and lines 1-42). What's not show by the combinations of Konno and Brokaw is the amplifier system is being used in a speaker configuration that having speaker housing with at least one treble band speaker and a sub-woofer speaker. Serikawa discloses a speaker system (Fig. 1) that is having a speaker configuration that having speaker housing with at least one treble band speaker (17) and a sub-woofer or woofer speaker (18) in response to frequency bands (equalization) control. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilizes the improved amplifier circuit of Konno and Brokaw for a speaker system that is having speaker housing with at least one treble band speaker and a woofer speaker, as taught by Serikawa, in order to perform proper signal biasing for the amplifier circuit and prevent signal distortion of the audio signal to improved accuracy of speaker outputs by the speaker system.

Regarding Claim 17, Konno further discloses a positive feedback path having a voltage divider that voltage divides a feedback voltage (Fig. 1).

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Regarding Claims 18-19, Konno further discloses a bass equalized audio signal that is delivered to a sub-woofer driver or full-range speaker driver at output 12 (It is inherent that the audio signal will be delivered to a sub-woofer driver, i.e., for low frequency audio output; or a full-range speaker driver in order to drive a speaker for generating an audible output).

Regarding Claim 14, Brokaw further discloses resistor 22 in series with the parallel pair of opposed diodes.

Regarding Claim 15, Konno further discloses a positive feedback path having a voltage divider that voltage divides a feedback voltage (Fig. 1).

Regarding Claim 16, Brokaw further discloses resistor 22 in series with the parallel pair of opposed diodes.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xu Mei whose telephone number is 571-272-7523. The examiner can normally be reached on maxi flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Xu Mei/
Primary Examiner
Art Unit 2615
02/21/2008